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ABSTRACT

Adults are the voters and citizen actors of today yet environmental educators have neglected to consider adult education as an area which requires special educational strategies. In this hands-on workshop participants reviewed adult education theory, practiced various learning strategies, and evaluated model programs that work. Program topics include: (1) Adult Education Program Planning and Design; (2) Preview of Adult Environmental Education; (3) Developing Criteria for Successful Adult Environmental Education Programs; (4) Research about Adult Environmental Education; and (5) Adult Environmental Education Case Studies. The program planning session covers such issues as steps to planning and critical factors conducive to adult learning. In the preview of adult environmental education, workshop participants designed educational solutions to sample environmental education problems based on adult education theory. Adult environmental education case studies include a noncredit environment course for adults, workplace education projects, decision maker leader training, and building collaborative partnerships in community environmental education. Contains a 205-item bibliography arranged by subject. (PVD)

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Nonformal Section Workshop on

Action Models in Adult Environmental Education

Coordinated by

Elaine Andrews, Anne Camozzi, Pam Puntenney

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PRESENTED AT THE 1991 NAAEE ANNUAL CONFERENCE, ST. PAUL, MINNESOTA

THE NORTH AMERICAN ASSOCIATION
for
ENVIRONMENTAL EDUCATION

Philosophy and Mission

Since its beginning in 1971, the North American Association for Environmental Education has been dedicated to promoting environmental education and supporting the work of environmental educators around the world. NAAEE is an integrated network of professionals in the field of environmental education with membership throughout North America and in 30 additional countries.

There are many environmental interest groups, and many organizations dedicated to the improvement of education. NAAEE uniquely combines and integrates both of these perspectives. NAAEE is deeply committed to environmental education, but it is not a partisan advocacy organization. Its approach to promoting environmental education is neither confrontational nor adversarial.

NAAEE recognizes the need for a coherent body of information about environmental issues, but its members also recognize that information and analysis are only part of an effective education program. To be truly effective, this body of knowledge must be integrated into all aspects of the curriculum and into all types of educating institutions for the widest array of audiences.

The Association is made up of people who have thought seriously -- over lifetimes -- about how people become literate concerning environmental issues. NAAEE members believe education must go beyond consciousness-raising about these issues. It must prepare people to think together about difficult decisions they must make concerning environmental stewardship and to work together towards resolution of environmental problems.

Programs and Activities

In order to translate theory into reality and provide tangible support for environmental education and environmental educators, NAAEE engages in a variety of programs and activities. Perhaps the single most important activity of the Association is the annual conference. Each year educators from around the world gather at a North American site to learn from fellow experts in the field and share experiences. The conference features a diverse mixture of concurrent sessions on topics of interest. In addition, the conference features a browsing library where new environmental education materials are displayed, and a film and video festival where participants can view the best in audio-visual productions. Additional conference activities include field trips, symposia to provide in-depth looks at particular topics, global briefings on environmental issues, exhibits, and noted speakers.

The conference is only one aspect of the Association's activities. A highly professional publications program is another key feature of NAAEE. The Association produces a bi-monthly newsletter with timely articles, resource listings and announcements. In addition, NAAEE maintains a series of professional publications of interest to environmental educators, and adds to this series of scholarly monographs and practical manuals on a yearly basis. Various catalogs and the conference proceedings round out the publication program.

While the conference and publications form the core of NAAEE's member directed programs, other important activities include testifying in support of environmental education legislation and innovative programs, maintaining a consultant and volunteer data base, providing information on environmental education techniques and programs in response to inquiries, and working cooperatively with other organizations in North America and throughout the world.

In addition to ongoing activities, the Association undertakes the development of model programs and other selectively targeted initiatives on a regular basis. Recent initiatives include creation of materials for use in NAAEE's Environmental Issues Forums (EIF) program, development of an agenda identifying research needs in environmental education, implementation of the NAAEE Training Institute to provide a forum for instruction and discussions in a variety of subject areas each year, and sponsorship of the VINE Network with its program of education in urban areas across the United States.

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Supplementary ideas:

Two Hats
Public Involvement Issues

ADULT ENVIRONMENTAL EDUCATION - ACTION MODELS
Summary

Adults are the voters and citizen actors of today, but environmental educators have neglected to consider adult education as an area which requires special education strategies. In this hands-on workshop, participants reviewed adult education theory, practiced various learning strategies and evaluated model programs that work.

Adult education theory is highly compatible with recommended environmental education strategies. The hands-on, problem-solving nature of environmental education programs can be easily and successfully integrated into all types of adult learning situations. This workshop explored adult education theory and its relationship to the practice of environmental education. Participants evaluated sample environmental programs in the context of adult education theory and evolved their own understanding of how they could best use adult education theory in the design and implementation of environmental education programs.

Key to understanding how to successfully program for an adult audience is the recognition of the distinct learning characteristics and needs of adults. Other considerations include specialized features of program planning, design and structure, and the role of the adult educator as facilitator rather than teacher.

Areas of adult environmental education needs which have interested researchers include: education for action with a research emphasis on locus of control; education during recreation in both museum/center and outdoor settings with the research emphasis on "perceived control"; education for sensitivity with the research emphasis on "predictors"; and education for natural resource management compliance. Other areas with developing research based information include citizen participation preferences and risk communication strategies.

Generally, studies report research of aspects of these major areas, but do not attempt to establish an overall paradigm for educating adults about the environment. To provide a method for predicting success of adult environmental education programs, results from these studies need to be interpreted in light of adult education theory and organized in a set of criteria. In the workshop, preliminary criteria were compared to presentations about existing successful adult education settings. Participants tested the validity of the criteria and generated thoughts on how the field of environmental education could adapt to enable more widespread success of adult environmental education.

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Inspirational quotes

In preindustrial societies, the rate of change was such that what a person needed to know to function as an adult could be learned in childhood. In societies hurrying to catch up, however, and in our own society with its accelerated rate of change, the urgency of dealing with today's social realities lies with adults. Society no longer has the luxury of waiting for its youth.

S. Merriam and R. Cattarella in Learning in Adulthood, 1991.

Adult education turns out to be the most reliable instrument for social actionists. If they learn how to educate the adherents of their movement, they can continue to utilize the compelling power of a group and still remain within the scope of democratic behavior. When they substitute something other than intelligence and reason, social action emanates as sheer power and soon degenerates into habits which tend toward an anti-democratic direction. Every social-action group should at the same time be an adult-education group, and i go even so far as to believe that all successful adult education groups sooner or later become social-action groups.

Eduard Lindeman, 1926

Our profession began with the job of producing something to shoot. However important this may seem to us, it is not very important to the emancipated moderns who no longer feel soil between their toes.

We find that we cannot produce much to shoot until the landowner changes his ways of using land, and he in turn cannot change his ways until his teachers, bankers, customers, editors, governors, and trespassers change their ideas about what land is for. To change ideas about what land is for is to change ideas about what anything is for.

Thus we started to move a straw, and end up with the job of moving a mountain.

Aldo Leopold, 1940

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ADULT ENVIRONMENTAL EDUCATION - ACTION MODELS
Workshop agenda

GOALS:

AM *- Provoke thought about the role of adult education in environmental education. Use adult education strategies to familiarize participants with adult education theory, program planning and design, and the role of teacher as facilitator.*

PM *- Provide participants with an opportunity to apply adult education theory and practice to an environmental education teaching situation and to evaluation of existing adult programs. Familiarize participants with examples of adult education research as applied to environmental education situations.*

WORKSHOP TOPICS	PRESENTER
8 - 8:30 AM Gathering of participants Audience survey - Question categories listed on sheets of flip chart paper positioned around the room: 1. Employer 2. Clients? 3. Topics that you teach about? 4. Teaching techniques that you use?	Participants on their own
8:30 - 9:15 Introduction to workshop Introduction of facilitators Goals for the workshop Personal needs assessment Inspirational thoughts	Elaine Andrews
Participant introductions activity	Anne Camozzi
9:15 - 10:30 What do we know about educating adults?	Anne Camozzi
10:45 - 11:45 Program planning and design 1. Planning models 2. Designing and using a needs assessment 3. Criteria for program design 4. Program format 5. Educational techniques 6. Role of the teacher as facilitator	Anne Camozzi

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12:45 - 1:30 PM **Preview of adult environmental education** — Elaine Andrews

1. Brief review of environmental education definitions, application to adults.
2. Opportunities currently available to adults for learning about the environment
3. Group challenge: devise a short term educational strategy to educate adults about an assigned problem.

1:30 - 2:30 **Research about adult environmental education:**

What do we know about adult environmental interests and learning style preferences?

1. Predictors of environmental behavior/environmental sensitivity — Dan Sivek
2. What have we learned from conducting environmental education programs? — Elaine Andrews

2:45 - 4:45 **Review of current environmental education projects** — Elaine Andrews and Panel

Use adult education program criteria for evaluating each program. Question time for each presenter.

Nature Center adult education - Mosquito Hill Nature Center in Wisconsin — Mary Swifka

Citizen participation project — Pam Puntenney

Workplace education project — Anne Camozzi

Decision maker/leader training — Emily Kling

4:55 - 5:15 **Discussion of how demonstration programs meet adult education needs based on suggested criteria** — Panel

5:15 - 5:30 **Conclusion** — Elaine Andrews and facilitators

Environmental education: what can we teach?

1. Two hats
2. What is our role?

ADULT ENVIRONMENTAL EDUCATION - ACTION MODELS
Background of 1991 workshop participants

Fifty five participants met to share and learn. Common employers, clients, education topics, and audiences are listed here. Not all were represented in this listing.

EMPLOYER

American Forestry Association (Washington DC)
Bishop Museum/State Natural and Cultural History Museum
Calvert County Public Schools–MD
Canada Park Service
City Solid Waste Department
City of Fort Collins, Colorado (Natural Resources Division)
City of Portland and CITE
Colorado Division of Wildlife
Como Zoo
Forestry Canada
Girl Scouts USA
Houston Arboretum and Nature Canter
IL Environmental Council-nonprofit
Kentucky Department of Education
Ky Natural Resources and Environmental Protection Cabinet
Metro Toronto Region Conservation Authority
Minnesota Board of Water and Soil Resources
MN State Government Office of Waste Management
ND State Water Commission
NESFD, a non-profit K-12
Story County Iowa Conservation Board
The Oakland Museum/City of Oakland
TN Valley Authority
University of Wisconsin-Stevens Point/College of Natural Resources, Wisconsin Center for Environmental Education
Ventura Regional Sanitation District-CA
Warren County Office of Water Protection and Recycling, ODNR, DLPR
Worthington Community College
Yosemite National Institutes

CLIENTS

Adults who are returning to college–some have been out of high school for 20-30 years.
Business, corporations
College students between ages 17-50
Community group leaders,
Community Groups
Elderhostel groups
Executive staff, adult volunteers
4-H, Scouts
Government employees and officials-local, state/provincial, and federal
Hunter Ed instructors
Park interpreters, park visitors
Pre-service teachers
Project Wild Facilitators
Public–general all ages- both rural and urban-ethically/socio-economically diverse
"Public" politicians
PVOs
School Youth groups
School administration and supervisors
Special population groups
Teachers K-12 (in-service)
Woodlot owners, woodsworkers

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TOPICS PRESENTED TO ADULT AUDIENCES BY PARTICIPANTS

Air pollution/quality
Composting
Ecology
Energy issues
Environmental stewardship
Environmental Science/Issue Investigations
Environmental decision making-taking action on decision
General Environmental issues
Global Issues
Governmental programs, "how to" educate general environment
Hazardous waste
Hazardous materials
Integrated resource management
Integrating EE in elementary school
Litter Prevention
Natural History
Natural and cultural resources
Natural resource issues including management/conservation
Project WET, WILD and WILD/aquatics
Recycling, general solid waste issues/management
State Government process on environmental issues
Sustainable development
Teaching methods
Urban concerns
Water issues
Wildlife ecology, ethics, etc.

TECHNIQUES USED WITH ADULT AUDIENCES BY PARTICIPANTS

Articles
Children's literature, reports
Classroom presentations
Conferences
Consultations
Demonstrations (woodlot)
Discussions
Essays
Fairs
Field trips -interpretive techniques/walks and talks
Films
Games
Handouts
In-services
Investigations
Journals
Lectures
Mailings
Newsletters
Peer Teaching
Poetry
Public Forums
Personal Action
Pre-service teacher workshops
Presentations
Real life investments
Residential programs
Roleplaying
Simulations
Slide shows
Small group work/discussions
Summer camps
Symposia
Teacher training workshops (lecture, slides, video, hands-on) Teaching materials
Theater
Thematic, experiential ed-all modalities
Tours
Training sessions
Videos
Workshops

ADULT EDUCATION
Program Planning and Design

Materials and presentation developed by Anne Camozzi
ECOLOGIC
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WHEN DO ADULTS LEARN?

1. When they feel comfortable.
2. When they feel respected.
3. When they're allowed to make mistakes.
4. When they can have some fun.
5. When they have a distinct need to know something.
6. When the content is meaningful and relevant.
7. When they can use their experience in the learning situation.
8. When they are allowed to learn in the way that suits them best.
9. When the process is highly interactive and participatory.
10. When they are allowed to evaluate and especially to evaluate themselves.

FOUR DIFFERENCES BETWEEN ADULT AND CHILDREN AS LEARNERS

1. Adults want to learn something they can use right away; much of what children learn is meant to be used throughout their life.

2. Adults bring a wealth of experience to a learning opportunity; in comparison, children's life experiences are very limited.

3. Adults know what they want to learn; children often don't.

4. All adults learn differently and at different rates; children's learning styles can be different, but they are at similar developmental stages.

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CHANGING IDEAS AND BEHAVIOR

How new ideas are adopted and become standard behavior:

1. *The knowledge stage.* What is the idea? How does it work? How well do I understand it? Implication: You must communicate the idea clearly.

2. *The persuasion stage.* What is the advantage of the idea? Should I try it? What are others doing? Implication: You must be persuasive.

3. *The implication stage.* I'll try it. Implication: You must be prepared for trial periods.

4. *The confirmation stage.* Did it work? Is it worth it? Should I continue to do this or go back to my original idea. Implication: You must be prepared to do follow-up.

Remember, by using adult education techniques you can teach an old dog new tricks!!

PLANNING PROGRAMS

1. Conduct a needs assessment. What do participants want and need? What does the organization want and need?
2. Formulate objectives based on organizational and personal needs.
3. Design a program to fulfill objectives.
4. Implement the program.
5. Evaluate the program

DESIGNING PROGRAMS

1. Content should be appropriate to learner and organizational needs.
2. Content should relate to learner's job and be practical.
3. Elements of the program should be within the facilitator's range of competence.
4. Program agenda should be flexible; allow time for changes and evaluation.
5. Goals and format should be clear to participants
6. Learning environment should be comfortable.
7. Allow time for climate-setting.
8. Choose an appropriate format.
9. Analyze available resources.
10. Select appropriate educational techniques.

Successful design depends on knowing the needs of the participants and their organization.

PROGRAM FORMATS

1. *Individualized learning*: home-study/correspondence course; self directed learning projects.

2. *Group learning*: action projects, institutes, workshops, clinics, conferences, conventions, courses, large meetings, exhibits, fairs, festivals, trips and tours.

TEACHING METHODS

1. *Lecture*. Over-used; learners are passive; can be dull unless presenter very skilled. Effective to present ideas to a large group in a short time. Usually more effective when combined with visual aids and handouts.

2. *Discussion*. Without thorough preparation discussion can meander and deteriorate; can be time consuming. Effective because participation sparks interest; is stimulating, sharing ideas can be very productive.

3. *Demonstration*. Involves four fundamental steps; explanation, demonstration, imitation/practice, correction/application.

4. *Inquiry*. Using thoughtfully phrased questions that are challenging, to the point, easily understood, and clear.

SOME EDUCATIONAL TECHNIQUES

1. Brainstorming/brainwriting
2. Case study
3. Role play
4. Discussion/buzz groups
5. Panel
6. Interview

NEEDS ASSESSMENTS

What are needs assessments for?

1. To find out what people want
2. To find out people's attitudes
3. To find out what response/solution is best
4. To find out what changes are required to make a program more effective

Why do you need needs assessments?

1. To develop long and short range plans
2. To help define and solve problems
3. To help decision-makers set priorities
4. To prove you know what you are doing
5. To surface opinions
6. To develop support and stimulate action

How to you start a needs assessment?

1. Identify the information you require
2. Identify the sources of your information
3. Choose the method for gathering information

What methods of needs assessment are there?

1. Observation
2. Questionnaires
3. Key consultations
4. Print media
5. Interviews
6. Group techniques
7. Tests
8. Records, reports, files and data banks

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THE INFORMATION GATHERED IN A NEEDS ASSESSMENT

1. A needs assessment identifies the GAP between the present situation and the desired situation

2. You should examine both present and desired behavior, knowledge, skill, attitudes and awareness

3. You should also be collecting data which will be useful in the evaluation stage. Some questions to ask:

   What will make the program effective?
   Will people learn?
   Will the knowledge be useful?
   Will knowledge and skill improve?
   Will attitudes change?

   What will make the program efficient?
   Will the program make efficient use of resources?
   Is it cost-effective?

   What will make the program appropriate?
   Will the program lead to the desired results?

   What will make the program adequate?
   To what extent will the program help to solve problems?
   Will it go far enough?
   Will it fall short?

If you have gathered this information before the program you have a basis for evaluating how successful you have been.

PREPARING FOR YOUR PRESENTATION

1. Check your presentation materials
2. Know how to use A. V. equipment, have back-ups
3. Know how you're going to start your presentation
4. Use index cards as cue cards; know your presentation plan
5. Anticipate potential problems; have a plan for dealing with them
6. Get a good night's rest
7. Wear comfortable cloths
8. Imagine yourself as a member of the group/audience. How would you react to this presentation?
9. Get to the room early and become comfortable with the layout, lights, general feel
10. Just before you begin take a few deep breaths; speak confidently to yourself

FOUR RULES OF PREPARATION

1. There is no such thing as being too well prepared
2. Proper preparation will make you less nervous and more effective
3. Organize rather than memorize your words
4. Prepare presentations and materials that suit you and your style

FOUR CORNERSTONES OF EFFECTIVE FACILITATION

ENTHUSIASM ENERGY

EMPATHY EXPERTISE

LEADING DISCUSSIONS

1. Develop your own style...don't try and imitate someone else. Remember that the purpose of a discussion is not to present ideas but to draw ideas and experiences from participants.

2. Begin by giving the purpose of the discussion. Pose a well-thought out question to the group. If no one responds, ask someone.

3. Adults will often discuss and participate more if they are in small groups. Consider breaking them into small groups for the beginning of the discussion.

4. Every member of the group should have a chance to have their say.

5. In some cases as a discussion leader you may have to take opposite roles or pose leading questions in order to ensure that all aspects of a topic are examined. Don't be afraid to play the "devil's advocate" role.

6. Always keep the group on the topic. This is one of your most important tasks. If you've clearly stated goals and objectives this should not be difficult.

7. Keep the atmosphere constructive. As discussion leader you should be neutral...remind the group that the purpose of the discussion is to explore different opinions not to change each other's thinking.

The most common complaints about discussions are that people don't stay on the topic and there isn't equal participation. How will you solve this?

EFFECTIVE PRESENTATIONS

1. Know your content; have a viewpoint
2. Use gestures and facial expressions
3. Make and hold eye contact for 3-5 seconds
4. Move eyes around the room
5. Have good posture, move for emphasis
6. Involve the audience; be dramatic
7. Project your voice, vary the speed and pitch
8. Use clear language
9. Show a sense of humor; avoid jokes
10. Be yourself

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FOUR RULES OF PARTICIPATION

Adults will participate if:

1. The program is structured to make them feel comfortable about participating.
2. The facilitator is sincere about inviting participation.
3. The program is of interest.
4. The facilitator knows how to deal with group participation.

PARTICIPATION CHECKLIST

1. Are the participants comfortable? Is the temperature of the room alright? Is the seating comfortable?
2. Is it time for coffee or a meal?
3. Do the participants know you well enough and trust you?
4. Is your presentation interesting and lively?
5. Is the language in your presentation too complex/too simplistic?
6. Have you structured the program so participants get a chance to talk to each other?
7. Are the participants tired from previous evening's activities? What can you do to accommodate this?
8. Have you emphasized to the group how much you value their opinion? Are you sincere when you say this?
9. Do you honestly want participation? Do you feel comfortable dealing with participation?
10. Is your program relevant to the group?

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ADULT EDUCATION
Steps to Planning

PARTICIPANT BRAINSTORM

HAVE YOUR #@&* TOGETHER AND WEAR THE RIGHT COLOR UNDERWEAR
* identify why are doing this
* identify audience and their needs
* identify time line
* identify subject and objectives
* identify goals/learning outcomes
* market the program
* locate facilities/human, capital, resources material
* know where your coffee is
* have an evaluation tool ready prior to workshop
* have a lesson plan ready/introductions, etc.
* have outlines/time lines/agenda ready
* plan on the spontaneous
* don't over-plan/over commit-be realistic
* plan for follow-up

ANNE CAMOZZI SUMMARIZED THE POINTS AND ADDED THE FOLLOWING REMINDERS:

1. Make sure your topic area is well established
2. Slowly build your agenda
3. Make sure you assess logistical questions such as how many people will be coming and for how long.
4. Hold a planning meeting with co-workers or with the organization you will be teaching.
5. Ensure that your program is well researched through a needs assessment..
6. Set goals and expectations
7. Assemble the necessary resources
8. Prepare evaluation tools to evaluate yourself as well the program and the participants learning.
9. Select appropriate techniques to meet objectives and program criteria and resources.
10. Whenever possible check out location and facility in advance- if you can't do it before the program arrive early so you feel comfortable in the room.
11. Remember to have fun!

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ADULT EDUCATION
PROGRAM PLANNING AND DESIGN
Steps to Planning

SMALL GROUP DISCUSSION

The group was divided into small groups to discuss important planning steps. The following are items which they identified as particularly important.

GROUP #1

- set goals/needs/objectives/purpose
- understand audience (voluntary vs. required)
- conduct a needs assessment (of some kind) conversation with participants
- have a clear objective, purpose, outcome
- plan logistics (room/space/time/date/) (food) (details) (speakers) (materials)
- plan publicity/PR
- determine techniques/format
- discuss with others/team planning/brainstorm ideas
- understand and account for financial constraints/ set budgets
- create scheduling/agenda/timing
- communicate with other facilitators
- research (e.g. topic area of country)
- know audience-part of country
- account for different learning styles in planning (custom learning)
- prepare materials, handouts
- plan logistics-adopter plug in purpose
- have an alternative plan ready (Plan B)
- run through whole thing in head
- plan evaluation (adaptation)-goals/needs/objectives/purpose

GROUP #2

- set goals–learn about audience, background, numbers
- know the physical environment (assess limitations and positions)
- plan a self-assessment for facilitator–needs'
- assess time
- plan promotion/ secure funds
- develop a strategy for connecting evidence and facility needs
- adapt model programs to suit your needs
- use previous evaluations to help you make better plans
- identify and gather resources
- determine format
- determine which methods/styles/content suit your goals and know your limitations

GROUP #3

- set objectives
- know your audience in terms of learning styles, background, interests
- secure resources including information, teams, people necessary, materials, handouts, audio-visuals, and level
- set an agenda and process
- determine location
- determine logistics: time line, check lists
- plan evaluation

GROUP #4

Acquire funding

- define audience–background, demography
- define your goals
- determine objectives, methods, timeframe
- plan assessment/evaluation
- plan promotion/advertising
- organize materials/space
- identify potential cooperators
- research/acquire needed background
- plan for providing ongoing support/research
- plan rewards for participants
- have an idea of what's needed, then check with people in perceived audience (advisory task group)
- do a more formal needs assessment
- start with existing materials, check audience needs and revise accordingly
- have a funding strategy to get the money to support the programming
- figure out, from above, what programming priorities are
- determine logistics
- develop an evaluation plan "what constitutes "success?"What are objectives and measures of success?
- audience recruitment

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ADULT EDUCATION
PROGRAM PLANNING AND DESIGN
Critical Factors Conducive to Adult Learning

SMALL GROUP DISCUSSION

The participants were divided into small groups to discuss what critical factors should be present in order for adult learning to take place.

GROUP #1

- participants must own what we're being taught (relevant)
- participants must be interested in what they're learning
- participants must understand logic behind what learning
- the program should start where the participants are at in terms of knowledge, skills, attitudes
- participants must be comfortable physically and emotionally and familiar with the agenda
- participants must be able to recognize expertise (and value it)
- program should appeal to adult curiosity
- participants should respect facilitator and be able to learn from role modelling
- participants should have an opportunity to learn "steal" from others
- participants should be engaged in "hands on"activities
- program should have humor and fun
- program should clearly give directions FIRST
- VISUAL AIDS should be LARGE enough for participants to see
- participants should be able to hear facilitator
- participants should receive positive reinforcement

GROUP #2

- participants need a personal stake in the program
- program should be kinaesthetic; utilize experiential learning
- facilitator should be receptive to participants
- facilitators should create an atmosphere of respect
- facilitator should be able to recognize learning modalities
- participants should know the purpose of the program: Agenda written out (good or bad?)
- participants should be comfortable physically
- facilitator should be open to ideas
- facilitator should be flexible
- facilitator should not give "Polyanna" answers

GROUP #2 cont'd.

- there should be an opportunity to process (group and/or individual)
- program should have follow-up
- program should participants to share information/experience
- materials and presentation should be organized
- participants should be comfortable physically and know where things are located (breaks, comfortable, chair, signage, parking, bathrooms
- participants should be able to participate in small discussion groups/sharing ideas
- participants should feel emotionally comfortable in an atmosphere where their self-esteem is maintained and built
- program should encourage participants to show respect for others
- facilitators should have credibility
- program should draw on others expertise
- facilitator should show sincerity with people and material
- program should be fun and have humor
- facilitator should be enthusiastic with dynamic presentations
- program should have an opportunity for hands-on/participation/practice
- program should meet people's needs
- facilitator should have reasonable expectations
- participants should know other's starting points/agendas/values

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GROUP #3

- facilitators must know interest, connections, experiences, knowledge, relevances to them
- facilitators should create a positive atmosphere that is human, non-threatening, interactive, have food
- program must be active using first hand knowledge

GROUP #4

- participants must feel they are in a "safe" learning environment
- facilitator must give clear instructions
- program must provide opportunity to practice with instructors
- facilitator must explain how things work
- facilitator must define parameters
- facilitator must take care of equipment
- program must be non-threatening
- program must take into account different learning styles
- program must take into account values of audience
- facilitator must know audience's language
- facilitator must respect the audience
- learning must be relevant to audiences lives
- facilitator must be willing/able to learn from your audience
- facilitator should let participants set agenda
- facilitator should be flexible about topics, pace, discussion

GROUP #5

- the program should help people learn
- program should have clear objectives
- facilitator should empower learners and show trust
- facilitator should be respectful of participants time
- facilitator should have resources available
- facilitator should have appropriate handouts
- facilitator should allow participants to learn from each other
- facilitator should create an atmosphere of acceptance
- facilitator should allow for different levels of participation
- facilitator should have a sense of humor and make it fun
- facilitator should recognize and show respect for participant's skills
- facilitator should take care of creature comforts, arrangement of room
- program should have varying teaching styles and activities

GROUP #6

- program should be built on perceived need
- facilitator should show excitement
- program should have a high level of interaction
- participants should feel the material is usable
- program should be relevant to present situation
- setting should be comfortable
- participants should have choices
- there should be a sense of familiarity between presenters and participants
- program should have an "entertainment level"
- information presented should be clear
- program should be time efficient
- participants should feel a sense of direction

GROUP #5 cont'd.

- participants need to learn self confidence
- facilitator should be able to focus
- facilitator should allow time for the process
- facilitator should have a sense of humor
- learners should feel at minimal risk
- program should have a practical application
- setting should be comfortable (temperature, furniture, break)
- facilitator should have appropriate level of academic and emotional knowledge
- participants should be rewarded
- program should have a diversity of teach/presentation technique
- facilitator should have a positive self-image

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ADULT ENVIRONMENTAL EDUCATION
Preview

WHY EDUCATE ADULTS ABOUT THE ENVIRONMENT?

Help to avoid future environmental problems

Surveys show that adults are interested

Adults decide about current problems

Adults are educators of the upcoming generation

Adult participants are often opinion leaders

Adults are becoming more and more interested in education about the environment

ADULT ENVIRONMENTAL EDUCATION OPPORTUNITIES

General print media
General nonprint media
Specialized publications
Private environmental organizations
Park programs - local, state, federal
Nature/environmental center displays/activities
Adult recreation programs - any source
Community resource/neighborhood center activities and publications
Service organization activities
Advertising for products
Business publications - such as fast food and grocery store flyers about the environment
University and agency outreach programs
Public participation in government
Professional development
Individual environmental action

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ADULT ENVIRONMENTAL EDUCATION
Developing Criteria for Successful Programs

SOME INSPIRATIONAL THOUGHTS

The goal of environmental education is to help students become environmentally knowledgeable, skilled, dedicated citizens who are willing to work, individually and collectively, toward achieving and maintaining a dynamic equilibrium between the quality of life and the quality of the environment.

Guide to Curriculum Planning in Environmental Education
Wisconsin Department of Public Instruction

In her article, "Environmental Citizenship: The Challenge of the '90s" (Learning, 5(3):4-5, 1990.), Andrea Prazmowski outlined 10 points that help us think about how we might apply this goal to environmental education for adults. She believes that environmental education should:

- consider the environment in its totality - natural and built, technological and social (economic, political, cultural, historical, moral, aesthetic);
- be a continuous lifelong process, beginning at the preschool level and continuing through all formal and nonformal stages
- be interdisciplinary in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective;
- examine major environmental issues from local, national, regional and international points of view so that students receive insights into environmental conditions in other geographic areas;
- promote the value and necessity of local, national and international cooperation in the prevention and solution of environmental problems;
- enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences;
- relate environmental sensitivity, knowledge, problem-solving skills, and values clarification to every age;
- help learners discover the symptoms and real causes of environmental problems;
- emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem solving skills;
- utilize diverse learning environments and a broad array of educational approaches to teaching/learning about and from the environment with due stress on partial activities and first-hand experience.

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ADULT ENVIRONMENTAL EDUCATION
Developing Criteria for Successful Programs

ENVIRONMENTAL ISSUES: PARTICIPANT PLANS FOR AN ADULT ENVIRONMENTAL EDUCATION PROGRAM

SAMPLE ENVIRONMENTAL EDUCATION PROBLEMS

The following education problems were provided to help workshop participants think about how adult education theory could be combined with environmental education needs. Each workshop group designed an educational solution to one of the following problems or chose a different issue which interested them more.

1. Construction practices allow a considerable amount of top soil loss.

2. Farm wildlife habitat is being lost or impaired as a result of intensifying agricultural and urban expansion.

3. Native plants are being replaced by weeds or horticultural varieties causing a loss of genetic diversity, increased management needs, and loss of wildlife habitat and forage.

In designing their educational program, each group was asked to consider:

Who is the program provider?

How will you assess your audience needs and interests?

What criteria will you use to design your program?

What program format will you use?

What educational techniques will you use?

What role will the instructor play?

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PARTICIPANT SOLUTIONS

Problem: Farm Wildlife Habitat

Program provider: State Fish and Wildlife Service
Audience: Farmers
Assess audience needs and interests by talking to:
- Farm Bureau
- Extension Service
- Farmers/Growers Groups

Program goals are:
- to plant species to attract wildlife
- to improve wildlife habitat
- to improve management practices to benefit wildlife

Program format will use:
- tour of demonstration plots
- maps-self guided tour
- meeting and free dinner to discuss

The instructor will act as a facilitator
- use farmers to teach farmers

Active Farmers

Present	Future
Attitudes	Better Resource Use
Practices	Knowledge

Problem: Farm Wildlife Habitat

Audience: Farmers (they have an outdoors focus)
Assess audience needs and interests by involving: farm organizations, Extension Service, Soil Conservation; hang out with farmers: in cafes, kitchen meetings; use publications that they read
Criteria used to design our program: Interactive one-to-one, ongoing program-measured results, focus on winter "down time"
Format/Educational techniques to be used:
- Train the trainers
- Kitchen Meetings
- Farm-related meetings
- Forums
- Problem Solving–appeal to self interest
- Handbook

Problem: Construction practices

Program provider: USDA Soil Conservation Service
Audience: Farmers
Program design and educational techniques include:
1. intimate meeting
2. at night
3. get community "leaders" involved
4. get farmers involved with program
5. demonstration farms (individual appointments)
6. remember everything is related to money–what is in it for me?
7. involve farm wives

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ADULT ENVIRONMENTAL EDUCATION - ACTION MODELS
NAAEE Nonformal Section Workshop
September 1991

Problem: Recycling Mandated, but no recycling markets

1. Program provider: Nonprofit–we are audience, industry, and households
2. Assessing audience needs and interests: what's mandated, the law, self assessment and public meetings, focus groups
3. Educational techniques to be used: limited mass media, newspaper, public hearings

Problem: Wildlife Habitat

1. Audience: General Public
2. Assessing audience needs and interests–through their interactions (civic/church/conversation/ etc. groups)
   - relevancy to them (quality of life issues)
   - public input
3. Educational techniques to be used include: use of other individuals/real estate values

Problem: Purple Loosestrife

Audience: Garden Clubs
Program provider: Government–state/providence
Needs Assessment: interview with club president how much know about plus (know nothing, planting)
Criteria (program design-objective?) Familiarize them with purple loosestrife and role in ecosystem, Alt plantings, their role in education
Program format:
  Field trip (slide back up)
  Sites with and without purple loosestrife–diversity
  Local yard with alternative plants
Educational Techniques:
  Demonstration and discussion (interpretation)
The instructor will act as facilitator to draw conclusions

Problem: Native plants replaced by exotic/introduced species

Audience: developers
Assessing audience needs and interests?–give it to a grad student to do
Goals:
  Present–unaware that problem exists
  Desired–need to know problem exist, how to solve
Criteria to be used in designing the program
  What's our end result–our goals? What drives developer to "tick", time line
Program format to be used:
  Reduce techniques
  Group involvement–feedback, 2 surveys, hands-on
Educational techniques:
  Public service announcement, media information, lobby
Instructor should: facilitate like "God"!! NO BULLSHIT

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RESEARCH ABOUT ADULT ENVIRONMENTAL EDUCATION
Predictors of Environmental Behavior in Wisconsin Members of Three Conservation Organizations

Presentation by Dan Sivek
University of Wisconsin - Stevens Point
College of Natural Resources

BACKGROUND

The ability to impart to students all the knowledge, skills, and motivation required for becoming active environmental problem solvers is a goal all environmental educators strive to attain. Definitions for environmental education stress environmental behavior as a major outcome. Environmental education charter, e.g. Tbilisi, 1978, do likewise. A major difficulty in imparting this so-call environmental literacy, however, lies in the simple fact that research has not satisfactorily identified those knowledge and skill components which are precursors to environmental behavior. Those studies which have attempted to predict behavior have typically focused on one of several variables, e.g. knowledge, and have accounted for but a small percentage of variance.

In a more comprehensive study, Hines, Hungerford, and Tomera (1986/87) conducted a meta-analysis of environmental behavior research and were able to identify those variables in descriptive research most strongly correlated with behavior. These included: verbal commitment, locus of control, attitude, personal responsibility, and knowledge. In experimental studies, the variables most strongly correlated with behavior were incentives, appeals, information, and feedback.

Based on their findings and on other research, Hines et al. proposed a model of "responsible environmental behavior" to stimulate and guide further research. However, recognizing the inability of meta-analysis to identify interactions among variables, Hines et al. recommended that "additional research is needed in an effort to discover those interrelationships which exist between each of the variables in the model. To accomplish this, research efforts must concentrate on all factors in the environmental behavior picture, rather than continuing to isolate individual components from those variables with which they likely interact".

The present study responded to this recommendation and also served to replicate research of Sia, Hungerford, and Tomera (1985/86) who assessed predictors of environmental behavior of Sierra Club and Elderhostel samples.

PURPOSE

The purpose of this research was to assess the relative contribution of eight selected variables to the prediction of environmental behavior of members of the Wisconsin Trapper's Association, the Wisconsin Council of Trout Unlimited, and Wisconsin members of Ducks Unlimited.

Predictor variables chosen for this research were:

a. level of environmental sensitivity
b. perceived individual locus of control
c. perceived group locus of control
d. perceived knowledge of environmental action strategies
e. perceived skill in using environmental action strategies
f. beliefs about/attitude toward pollution
g. beliefs about/attitude toward technology
h. psychological sex-role classification

DISCUSSION

Significant predictor variables found in this study include:

1. Perceived skill in using environmental action strategies. This perception was found to predict environmental behavior.

2. Individual and group locus of control. Perceived control appears to predict those who are likely to exercise citizenship strategies.

3. Environmental sensitivity.

Contact Dan Sivek for specific information on the design of the study and how the results could be interpreted.

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RESEARCH ABOUT ADULT ENVIRONMENTAL EDUCATION
Sample of Concepts from Key Research Areas

Specific references are included in the bibliography.

ASSESSMENT OF PERSONAL BEHAVIOR CHOICES

T. Heberlein, 1983
Studied the influence of price and attitude on energy consumption. Heberlein found that a psychological commitment to shift energy use to off-peak hours had a larger impact on behavior than price.

R. De Young, 1990
Reviews results of surveys conducted as part of six separate recycling education programs. Surveys investigated: attitudes toward recycling, self-reported recycling behavior, future intentions, barriers to recycling, and motives for recycling. Results showed that recycling education does not need to concentrate on people's attitudes and behavioral intentions which are already very positive. Instead educators should focus on increasing familiarity with specific behaviors necessary to recycle (how to prepare materials, how to sort/store, where to take materials, how to prepare for pick-up, etc.).

CITIZEN PARTICIPATION IN NATURAL RESOURCE MANAGEMENT

K. L. Williams and J. E. Force, 1985
Forest Service studies detail how and when people prefer to participate in environmental issues problem solving. Their results are similar to those found in adult workshop studies: only selected people come, but those who do come get a lot out of it and remain committed.

V. Ibikunle-Johnson, 1989
Describes a participatory research process aimed at development of a community environmental management strategy. Community members are involved in an assessment of community environmental problems and participate in the development of educational and training programs recommended by assessment results.

EDUCATION FOR ACTION/COMMUNITY ACTION

N. P. Lovrich and J. C. Pierce, 1986
This study was conducted to help determine an appropriate design for public education about nonpoint pollution. Results showed that the public was not ignorant, but quite knowledgeable

about scientific and technical issues related to local resources. The study found that: a) the public is able to review technically based management strategies; b) public concern and knowledge levels can be affected in the short run.

D. A. Simmons, 1984
Results from this study indicated that a simulated slide visit and an on-site visit can be equally affective in providing information about hazardous waste alternatives. However, the slide selection must be very carefully planned.

EDUCATION FOR NATURAL RESOURCE MANAGEMENT GOALS

D. J. Decker et al, 1988
This study was designed to explore whether workshops accomplish their goal. Pre and post surveys showed that during the workshop, woodland management participants raised their aspirations for carrying out woodland management activities. A follow up study conducted two and a half years later showed that 82% completed their intentions.

T. Heberlein, 1989
Argues that obtaining systematic information on public attitudes and preferences as part of a planning process may not be enough to guarantee acceptance of recreation changes or limitations related to a local natural resource. Barriers to acceptance included: lack of government policies to support results of research findings, public opposition by special interest groups, and extraordinary legislative needs to allow changes to be made. Author indicates that education and involvement of economists and policy makers is a necessary component of translating research into action.

EDUCATION FOR NATURAL RESOURCE POLICIES DEVELOPMENT OR CHANGE

A. Koines, P. Cummins, R. Rowe, 1990
Describes a regional EPA Integrated Environmental Management Project (IEMP) group which was able to reach political consensus on environmental priorities. The project featured a risk perception and ranking project directed by an advisory group of agency directors/managers, local public officials, and private sector representatives. Availability and quality of information affected ranking choices of participants. Training in the basics of risk assessment was important to participant use of information.

D. Soden, N. Lovrich, J. Pierce, B. Lamb, 1988
Investigates natural resource agency personnel perceptions of public involvement. Surveyed personnel exhibited a preservation-oriented position, but had diverse views on the quality of interest group information about policy. Authors interpreted their results to mean that, on the whole, a broad range of groups would have access to decision makers.

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EDUCATION DURING RECREATION

G. M. Moscardo, 1988
Discusses visitor responses in interpretive centers. This study provides an excellent summary of the literature about museum visitors and demonstrates the association between the complexity of exhibits and how long visitors paid attention to them.

F. Noe and R. Snow, 1991
In this National Parks study about user values, visitors demonstrated strong concern about environmental impacts.

H. Moyer, 1989
Moyer studied the characteristics of Wisconsin adults interested in wildlife study. For example, she learned that 83% of Wisconsin citizens fall into one of two groups: the nonconsumptive user and the dual user (one who hunts as well as observes). She also learned about preferred wildlife study activity, preferred location for study (home vs. trip), limitations to observing wildlife and other topics.

T. Teich and R. D. Townsend, 1981?
Results of participant surveys provide information about how to publicize to adult groups, reasons for participation, and categories of participants. The study found that workshop participants were mostly educated people. Attractive aspects of workshops included: use of membership newsletters and direct mail for publicity, expertise of the workshop leader, and the workshop topic.

RISK COMMUNICATION STRATEGIES

Studies have been conducted by individuals at Rutgers, Cornell, and Colorado State. They have not been cited in this bibliography due to volume and range of this material. Generally, these studies have come up with many recommendations about how to bring the public into environmental risk discussions.

EDUCATION FOR SENSITIVITY TO THE ENVIRONMENT

Research has focused on predictors. See Dan Sivek's presentation for more details.

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ADULT ENVIRONMENTAL EDUCATION CASE STUDIES:
Non credit Environment Courses for Adults

Mary Swifka
Mosquito Hill Nature Center
New London, Wisconsin

Elaine Andrews
University of Wisconsin Cooperative Extension
Environmental Resources Center

Mosquito Hill Nature Center conducts over 60 environmental short courses for adults throughout the year. These courses have been successful because they:

- feature topics that interest adults: including recreational interests, study of specific nature topics, touring ecological areas of interest
- provide hands-on or field based courses
- use high quality instructors
- provide a consistent program; people can rely on certain numbers and types of courses being available every year
- are conscientious about publicizing their programs widely

The University of Wisconsin Cooperative Extension coordinates and publicizes a semi-annual "Environment" tabloid which lists approximately 120 non credit short courses for adults organized by approximately 30 organizations. Institutions which choose to participate in this free publicity varies from year to year. Sponsoring organizations include nature centers, university and college outreach programs, private groups and free lance naturalists.

The tabloid is printed on newsprint and distributed through direct mail to 9000 individuals who have enrolled in past courses. Participating organizations and county Extension offices also receive multiple copies of the catalog which they share with their clientele.

ADULT ENVIRONMENTAL EDUCATION CASE STUDIES:
Workplace Education Project

Anne Camozzi
ECOLOGIC
Nova Scotia, Canada

As an environmental educator I was faced with unique challenges in designing an environmental awareness program for 1200 employees of a pulp and paper company in Canada. These basic challenges were to gain management trust; to design an honest and relevant curriculum; to ensure employee input in the learning process; and to design a program which would have a long-term impact. Successful programming required the use of adult education principles in both design and facilitation.

Stora is a Swedish-owned company which operates a mill in the small Nova Scotian town. The company directly employees about 1200 people. The mill, like the company, dominates both the landscape and economy of this area. The company decided to have an environmental awareness program for all of their employees following the direction of the parent company in Sweden. In addition, the Canadian Pulp and Paper Association had recently developed a policy that all employees should receive environmental training.

The program involved every employee in the company ... from the president to the security guards and was designed using basic adult education principles. We wanted the program to based on the learning needs of participants, be fun, open, and comfortable, be based on discussions rather than lectures, and provide an opportunity for participants to learn from each other on the basis of their individual and collective experience.

The first step in program design was to conduct two needs assessments. The first was in the form of a survey to employees on learning needs and interests, criteria for a successful program, and general comments on Stora and the environment. The second needs assessment was conducted with management in a workshop form to determine desired outcomes of the program. From this I was able to decide what components were necessary to make the program successful.

On the basis on the needs assessments program objectives were defined. These included:

a. Increase general awareness and knowledge of global, mill, and woodlands environmental issues.
b. Increase employee's abilities to communicate about Stora and the environment.
c. Increase knowledge of personal responsibility for the environment in the workplace, home, and community.
d. Increase the level of trust between employees and management with regards to environmental matters.
e. Develop an environmental policy for the company based on employee input.

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The program was designed to meet the above objectives at the same time as considering the operational constraints of the program. This phase included: training of facilitators, preparation of course materials, hand-outs, displays, evaluation strategy, scheduling, and equipment needs.

Building all these elements into the program design created tremendous logistical constraints.

1. The workshop approach took four months to train 1200 people (25 people a day; four days a week).
2. The 1200 woodlands and mill employees had to be scheduled so that operations would not be affected.
3. Because the adult education approach was new, facilitators had to be trained to understand adult learning and group process techniques.
4. Course materials, handouts, videos, and displays all had to be prepared from a scratch. There were few course materials we could borrow from anywhere else.

The program content included a video on the Brundtland Report, a complete examination of woodlands and mills issues, and a Funtest. Additionally, a key element was to develop an environmental policy for the company based on workshop discussion. The employees would "own" the corporate environmental policy through their recommendations.

To increase trust between management and employees a senior manager was present at every session, participating fully and answering questions. This accomplished two tasks at one stroke: employees were more convinced that management was serious, and management became even more serious as they listened to, and observed employee responses.

The program was evaluated by the following:

1. A qualitative survey through post-workshop reaction forms to evaluate how well the program met objectives and to rate facilities, course design and delivery.
2. A quantitative attitude survey administered to a randomly chosen group of employees to test their attitudes towards environmental responsibility and management views.

To follow-up the program every employee received a binder at the end of the program. This binder included: responses to questions that could not be answered during the program; results of the policy workshops; lists of actions employees could do at work and home; and a description of the follow-up strategy.

Results

The Stora program was a success beyond everyone's expectations. Employees expressed so much interest that mini-versions of the program were held for spouses and other interested community members. Employee attitudes changed to a more positive attitude towards environmental responsibility in every area tested. The final attitude survey indicated that employees had radically changed their views towards the environment and that this change was long-lasting. Management have noticed a change in attitude and behavior on the part of workers. At the suggestion of employees a company-wide environmental committee has been

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formed. The environmental policies suggested by the employees during the program have been adopted as official company policy. In addition, some community members have planned environmental programs as a result of the motivation they felt after attending the program. The program itself has just been given a major environmental award provincially and nominated in the federal category for industry achievement. The Stora program is a good example of how effectively designed education programs can change industry attitudes towards the environment.

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ADULT ENVIRONMENTAL EDUCATION CASE STUDIES:
Decision Maker Leader Training

Emily Kling
National 4-H Council
7100 Connecticut Ave.
Chevy Chase, Maryland

4-H Environmental Stewardship Initiative

Emily Kling is the director of a 4-H program working on the development of Environmental Stewardship curriculum for 4-H clubs. Their approach emphasizes experiential learning. Materials are being developed through partnerships among major corporations, foundations, state Cooperative Extension staff, Extension Service/USDA and National 4-H Council.

To raise enthusiasm and funds for the program, the 4-H Council has piloted a number of approaches:

- They have developed attractive materials and presentations for use with major corporations interested in supporting youth environmental education.

- They have provided several 4-H National Resource Leader Forums funded in part by a corporation. Funding provided travel money to state representatives from around the country. Participants learned about innovations in the field and contributed ideas to the materials development process.

Important concepts which have been shared throughout this project have been:

- that 4-H youth should be involved in environmental stewardship education

- that training adults to lead environmental stewardship education requires the transmittal of specific skills appropriate to this topic

- that successful education of youth about the environment requires the use of specific strategies emphasized by environmental education theory and practice

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ADULT ENVIRONMENTAL EDUCATION CASE STUDIES:
Community Environmental Education: Building Collaborative Partnerships

Presentation by Pam Puntenney
Environmental consultant,
Environment and human systems management

The Setting: Many communities are in a state of turmoil trying to figure out how local governments, businesses, and community leaders can better meet the needs of the communities they are serving. Among the decision makers, it is common knowledge that we need to re-think the way our political issues are framed by moving away from the traditional win-loose approach to thinking in terms of win-win strategies by envisioning a framework that outlines a number of desired outcomes. This process that must involve a diverse group of people with competing interests who can focus on problem solving while looking at the whole.

This project took place in a mid-western city of about 120,000 people located forty-five minutes from a major metropolitan area, and is the home of an internationally renown University. While a number of people work for the University, a fair number use the city as a bedroom community to commute to their work in nearby towns and cities. A recent survey conducted by the area's Development Council learned that the top five determining factors to attract new businesses and quality professionals included: 1) a high quality of life, 2) good schools, 3) a good place to raise kids, 4) cultural events, and 5) natural features. As a whole, the community is environmentally aware and has supported a number of environmentally related programs over the years. Therefore, it was not unusual that this project selected protection of natural systems as an important starting point to construct a useful model for handling future issues.

The Problem: In response to the increasing lack of resources, financial and institutional, to adequately deal with complex community-wide issues, a group of community leaders began meeting on a regular basis to discuss possible solutions. From these series of breakfast meetings grew a program known as the "Leadership For The Future". Over the next four years the group grew from the original 3 to 30 members successfully maintaining an excellent reputation for providing leadership and a voice for public participation. With no political agenda, the purpose of the committee was seen as educational and therefore kept a low profile. The focus of the group was on identifying the necessary mechanisms to facilitate a process "to enhance or build collaborative relationships between the governing entities, the community, community organizations, and community leaders in order to anticipate and strategically address the issue of Natural Resource Protection."

The problems the program faced were fourfold: 1) Historically each of the competing interests groups don't and /or won't sit down together, 2) Support for isolated environmental projects such as EE in the schools, solid waste, and recycling was strong but it became another matter when talking in terms of environmental systems, 3) The reality and benefits of sustainable develop in the community-wide area were becoming apparent but were not at all dear in terms

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of policy and everyday decision making, 4) Community leaders involved in the program were typically highly successful people holding positions of responsibility such as president, executive director, senior partner, mayor, etc. and were use to knowing about issues and educating themselves as needed but were not very interested in publicly admitting a lack of knowledge about environmental systems. While natural resource protection was viewed as a mom and apple pie topic, its dynamic nature alluded definition in terms of pragmatic solutions. This kind of community environmental education demanded more than the usual modes of citizen participation, adversarial strategies drawing upon collaboration and forming partnerships.

The Approach: The multi-dimensionality of the process challenged the group the first year to rethink what would be an appropriate approach. At first people felt there was an urgent need for a strategic plan for the area. Then, through further discussion, it was decided a "grassroots" approach would better assist in identifying effective ways to communicate the community's real needs to the key leadership. It was decided that at a later date a strategic plan would be formulated and put into place. The committee then saw themselves acting as a catalyst to help frame problems and focus solutions while striving for consensus on the methods to achieve cooperation.

The committee developed a plan of action for the next three years that included the following goals:

Short-term - Identify leaders capable of looking at the big picture and slowly enlarge the committee; to be a catalyst by convening a group of community leaders for the purpose of gaining agreement on methods to define a solution.

Mid-Term - Secure funding, maintain contact with community leaders, complete a study on the community-wide needs for Natural Resource Protection; and

Long-Term - Develop at least one or more areas of cooperation between governmental units in the protection of natural systems evidenced by tangible action.

Implications: Environmental Education cannot be taught but it can be learned. Environmental issues are currently defined in terms of the social/cultural, economic, political, technological, and ecological context. The lines separating environment and development, local and area-wide, institutions and community are softening. In terms of Community Environmental Education, new learning models are required based upon enhancing and encouraging collaborative relationships. The Leadership For The Future forum provided those opportunities. The learning for us as environmental educators is that the knowledge we have gained over the last decade about environmental systems is not readily accessible to the public. We are creating the needed institutional structures as we go along. Our job is to act as a facilitator of that process.

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Updated February 1993
By Elaine Andrews, Anne Camozzi, John Disinger, Pam Puntenney, and Meta Reigl

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ADDITIONAL ADULT EDUCATION RESOURCES SUGGESTED BY PARTICIPANTS

Articles
"The Many Colors of Green"-SF Bay Guardian, 8/14/91
"Ecology and Social Meaning: Critical Support for Earth Day"-Tikkum Vol. 4 #2 March/April 1990

Books
Global Mind Change
Future Lives-J. L. Simmons

TWO HATS[1]

It would appear that environmental educators have a bad case of the "two hat" problem. We have come by the problem naturally and therefore, we have paid little attention to it.

The problem is simply that industry, utilities, labor, business, media and other segments of the population and the general public have consistently recognized only one hat when talking about environmentalists and environmental educators. It is not uncommon for dedicated environmental educators to be summarily dismissed as troublemakers-environmentalists. This one hat view is easily explained because environmental educators are almost always environmentalists. Perhaps definitions will help clarify the problem.

Any world citizen who advocates with greater or lesser action that wrongs against our environment must be stopped is an environmentalist. Perhaps the negative reputation environmentalists have stems from the dramatic and radical actions of a few.

An environmental educator, on the other hand, is any world citizen who uses information and educational processes to help people analyze the merits of the many and varied points of view usually present on a given environmental issue. The environmental educator is not the "mediator," "trade-off specialist" or "negotiator," but a developer of skills and an information analyst who prepares the people (from any segment of the population) who will participate in environmental decision making.

Environmental educators, therefore, need to be as "value fair" or "value free" as they can when working in this role. They must scrupulously strive to get all the facts, examine and illuminate all the viewpoints, and keep from letting their own particular position (as an environmentalist) from mixing with their educator role.

My suggestion is simply that environmental educators make an effort to clarify the two distinct roles. At every opportunity, we should emphasize the neutral nature of environmental education activity. Strong advocacies are all around us, each using the techniques of persuasion and propaganda to build their constituencies. We must ourselves be familiar with all sides, stand firm for each advocate's right to be heard and provide a rational stage for informed debate.

Environmental educators have the right and the duty to be environmentalists, but the dual roles must adhere to the original premise-to keep each hat on its proper head, while utilizing to the fullest the professional skills of the environmental educators.

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[1]John Hug. As noted in *A Guide To Curriculum Planning in Environmental Education*. Wisconsin Department of Public Instruction, 1989. Reprinted from *A Report on the North American Regional Seminar on Environmental Education: A Confrontation with the Issues: Environmental Education for the Real World*. Columbus, OH: SMEAC Information Center, 1977, see Aldrich 1977.

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LEADERSHIP EDUCATION NETWORK

AS YOU LEAD...

Public Involvement Issues

Why Public Involvement?
Lorna M. Miller

Extension is in the early stages of a change in the way it develops and implements programs, extending beyond disciplinary programming to issues programming. 'Issues' for Extension are defined as 'matters of wide public concern arising out of complex human problems.' Extension also acknowledges that issues programming requires the identification of human problems in their own context with secondary regard for traditional subject matter, audiences and methods of program delivery.

Methodology used for addressing complex and ever-changing social issues must involve some meaningful form of public participation. Social problems must take into account the culture of the community and individual values. Social science literature has shown definitively that for successful implementation of a policy to occur, people must be involved in the formulation of that policy.

David Mathews has been dealing with a variation of the same concern since the Domestic Policy Association's first conference on the Public and Public Policy in 1983. As a founding member of the association that created the National Issues Forum, Mathews and his colleagues are addressing two questions: "How can citizens be helped to work through their differences and face up to hard policy choices?" and "How does the average citizen come to terms with the complex issues forced into their lives every day by circumstances at work in the media, and by their own aspirations and concerns?"

Considerable insight can be gained from reflection on his thoughts about "how the public learns the public's business." The following text presents an edited, composite of his address before the Expanding Leadership faculty development project and excerpts from "The Public Voice and the Political Process," a document published by the Domestic Policy Association.

Listening to Public Discussion
Dr. David Mathews

We are members of different factions and interest groups for good reason. There are differences among us. We need to understand where we differ, and to acknowledge those differences. But at the same time we need to find out where we agree. The National Issues Forums are designed to help citizens move beyond their initial opinions to well-considered second thoughts, beyond special interests. If political leaders only listen to constituent petitions, then no matter how skillfully they listen, they will not hear the crucial conversation of citizens talking to citizens. Citizens thought of only as constituents become no more than political consumers. There is no relief from special -- even single -- interest politics unless the public talks first to itself. Talking together is the only way, absent force, to transform a thousand legitimate special interests into a "public."

Woodrow Wilson said that the public's talk -- its counsel with itself -- makes for a free public.

"We must learn, we freemen, to meet, as our fathers did, somehow, somewhere, for consultation. There must be discussion and debate, in which all freely participate... The whole purpose of democracy is that we may hold counsel with one another, so as not to depend upon the understanding of one man, but to depend upon the counsel of all. For only as men are brought into counsel, and state their own needs and interests, can the general interests of a great people be compounded into a policy suitable to all."

One criticism of "the public voice," of course, is that it is really a thousand voices, often self-serving and always changing. There is no value in being romantic: there are many different voices; they can be self-serving; and they do change constantly. But hearing the man on the street give his opinion creates the impression that all the public has are opinions. Facts we can count on -- and facts come from other sources:

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the news gives us the facts, experts give us facts, the data give us facts. Opinions? Well, one person's opinion is as good as another's. Right?

Not quite! The news can tell us how much sulfur dioxide the experts calculate comes from burning high-sulfur coal. But, what those facts mean to different people we can only find out from talking to one another. The public creates, uniquely, "public knowledge."

What is common to all of our different and often conflicting reactions to "facts" can only be known through an intense kind of public thinking and talking. Those shared understandings are a real, substantive contribution. The refined distillate of public deliberation is what we depend on to make policies that do not change with every day's poll results: policies that give us stability because they are based on what noted public opinion analyst Daniel Yankelovich calls "public judgment." And careful public conversation (what Dan calls "working through" the issues) is the only way we have of transforming opinion into more stable judgment.

How does the public come to terms with the public business, how does the average citizen come to terms with the various choices?

Issues and Policy Development

The first issue that we've dealt with is to define what we mean by a "public policy issue." Policy for us is basically a choice, expressed in a sense of direction that reflects the purposes that we have as a community, as a state, as a nation. We found it very important to distinguish between a legislative policy, an expert policy, and a public policy. The legislature makes policy when it chooses a piece of legislation, and often that legislative debate becomes a substitute for public policy debate. We are caught up in what the legislature is debating, and we debate in exactly the same terms the legislature debates it. It is very important that there be legislative debate. It is very important that the public understand and follow those debates, but what the public does is not what the legislature does.

Sometimes we also confuse an expert issue with a public issue. When experts approach an issue, it's their job to know with as much certainty as they can what the facts are. Does this particular chemical cause a certain problem? Do these conditions warrant some action or no action? It is important to know. But we cannot confuse what experts do about issues with what the public does with an issue. You know it's important for the public to know the facts, know as much about the issue as they can. What the public does when it confronts an issue is not exactly the same as when a group of professionals or experts confront an issue. What, then, does the public do in relationship to a public issue? That seemed to us to have to grow out of an understanding of the role of the public in democratic politics.

Government vis a vis the public

We need to sort out whether the public should do certain things or the government should do certain things. This is really a delineation of those things that the public and the public alone can do. But no government, no matter how good, how effective it may be, performs the public role. For example, no government can define its own purposes; that is, no government can create its own source of legitimacy. No government can build common ground, governments can build common highways but not common ground. No governments can create political will; they can encourage it, they can applaud what citizens do, but they cannot create the will to act. No government can create; only citizens can create citizens.

Dimensions of Public Choice

In order to do these things, particularly to define purposes, the public has to make choices. There are at least three dimensions to making a public choice. The first obviously is that we must know what's going on. What's happening? What's the context in which we have to decide? What are the facts? Perhaps most of all we have to know those facts that tell us what our limits are. How far can we go? What's possible and what's not possible? We also need facts that tell us what the interrelationships are within a set of variables. What the consequences are of doing one thing as opposed to another.

But the heart of the matter seems to be not merely a question of fact, but most of all a question of value – making choices in politics is really making choices about those things that are most valuable to us. Choices really aren't so much just about the facts – they're about what the facts do, what the circumstances do to the values that we hold. And when we make choices, we have to face the fact that our values conflict not only among us but within us.

Political choice-making is difficult most of all because it requires us to look on the one hand at context and the other hand at our values and to decide how the two come together. And when we have to make those decisions, when we have to see how context and values fit together, we have no independent source of authority that we can go to tell us exactly what the right fit is.

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Let me give you a very down-to-earth illustration: Let's say you're driving a car and the speed limit is 35 mph. That's what the norms are, as expressed by the values of society. It seems that at 35 mph most of us can get through that particular section of town without bumping into one another or jamming up traffic. But let's say it's raining, there's a friend of yours in the car who is ill. Now, on the one hand you have a set of social norms that are reflected in the sign that says "drive 35 mph." It's raining which suggests that you should drive at an even slower speed, and yet you have an ill friend in the car. Now, you have a set of values and you have a context and they pull you in very different ways and at that point, you have to make a decision about what you will do and there really isn't any guide for you. You have the pull of both values, you can't disregard them. You have to be very conscious of the context in which you operate.

Politics seems to confront us with the task of having to decide on matters that are of immense value to us in situations in which we can't be absolutely sure of what to do. In fact, we can't be sure at all because we're not just dealing with unknowns, something that we might figure out if we had a little more time. What we're dealing with is the unknowable. There is no absolute standard of how to apply context and values and make the right decision.

Mass Opinions/Reflective Judgements

How do people operate in a world that is of necessity one that forces them to make choices about things that are truly valuable, in a situation where they cannot be certain? Well, we do it by opinions. Nothing wrong with opinions; that is, making some estimate of what reality is when we can't be sure. We do it all the time. But because we are so dependent on opinions in politics, we have to be very careful about the kinds of opinions that we use. Some of our opinions are just first impressions. They're visceral reactions. But there are other kinds of opinions that are more reflective and shared and to make the distinction between the two, we've taken to calling the first "mass opinion" and the second "public judgment." When we share our opinions about what is happening, about what our values are, when we reflect on them, we can come to something more than simply mass opinion. We can come to shared, reflective judgments.

Let me illustrate what the difference between opinions and judgments with a story. If you were a business group or let's say more specifically you were the building committee of the building that you occupy, and we asked you to go out and look at the building and make a decision about what you should do with it. If you had a short time to do it, you would probably go out the various doors that are available to you, you'd come back in and you would then aggregate what you had seen, see what the majority view was, and act accordingly. But, what you would really find out by aggregating your impressions of the building would really be how many people went out which door. Because those of you who had gone out the front, the south, or the north of the building would see a very different building from those who had gone out of the side. Now let me suggest a different scenario. If, in fact, we sent one delegation out the south side of the building, one north and one east and one west, and then you came back and you talked about what you had seen and you described it and shared your perspectives and we integrated those. Let's say we got an artist in to draw a composite of what the building was like and then put the building on the table. I would suggest to you that the composite drawing would be more accurate than the impression of the building by simply getting a majority of the opinions. Now that integration of points of view, sharing of judgments, refinements are what constitute public judgment as opposed to mass opinion. In fact, when people have done this, they have actually created a kind of knowledge that might well be called public knowledge.

Public Knowledge

Public knowledge consists of those things that we can know when we are together and never when we are alone. That may strike you as rather absurd to say that there is a class of things that we can know when we're together and we can't know when we're alone. But in fact there are. It doesn't take long for you to imagine what those are. You can know what the facts are of a situation, whether something is long, short, tall, heavy, light, without any reference to anybody else. You can read it in a book, you can go to a library, but you can't know what those facts mean to another person without talking to that person, without some interaction. The knowledge that we have that goes beyond facts, of what the facts mean to other people, is a different kind of knowledge. The kind of knowledge that we call public knowledge.

Psychological Side to Choice

This business of acting when we can't be certain on matters that are really of importance is not an unemotional event as we've all witnessed. Sometimes it's too emotional. The very process of making a choice frustrates us, forces us to come to terms with limitations, with consequences and that often aggrevates us. So the

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question of making public policy is not just an academic matter in which we decide these issues. It's really making these choices and coming to terms with the emotions that are involved. There is a psychological side to making a public choice. And what we seem to do when confronted with choices either personally or as a community is that we try to avoid them. We do all the things as a group that we do as individuals. We deny that the choice has to be made, we get angry at the prospect, all because making a choice means that in order to choose one thing we have to give up something else. A choice forces us to lose and then we face the possibility of loss. Even on a matter of choice, we react with denial, and anger, and all the predictable responses. Making public choices means working our way through those emotional reactions to the point where we no longer are emotional about them. I don't know of any way not to have people feel emotional about things that are important. But the point is to gain control of our lives so that we can operate with some command over what we do.

Moving Toward Common Purpose

So, all of this is to say that making public policy for us is more than knowing what's going on, getting the facts, making a rational decision. It is being informed about the issues before the legislative or expert policy is set or understanding what experts have to say. Public choice is a deeply human dilemma, and what we've tried to work on are ways that help the public get past the inherent obstacles to making choices. I don't know of any community or country, not any democratic community or country, that could come to agreement without a sense of common purpose. These are some things that we can agree to, these are the parameters in which we would accept legislation or policy, that allow us to move ahead with common action. They allow us to chart courses in a long range term. What we really want to avoid in policy is taking a series of actions that take us two steps in one direction and back in the other. Or a course in which we just wander around. In making public policy, we need some consistency amongst the actions and we do that by getting a coherent sense of what our values are as we share those with other people.

David Mathews has been president of the Kettering Foundation since 1981. Dr. Mathews was president of the University of Alabama from 1969-1980, and Secretary of Health, Education and Welfare from 1975-1977.

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